

BLUE EARTH COUNTY HIGHWAY DEPARTMENT

CONSTRUCTION PLAN FOR BITUMINOUS
OVERLAY & AGGR. SHOULDER

COUNTY STATE AID HIGHWAY NO.53

END S.A.P. 07-653-06

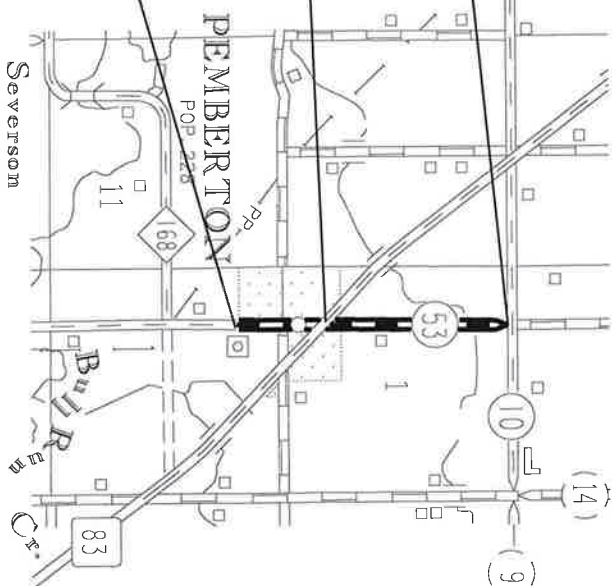
STA 403+45

T.H. 83 EXCEPTION

STA 359+38 TO 361+00 = 162'

BEGIN S.A.P. 07-653-06

STA 341+30



R 25 W

DESIGN DESIGNATION

ADT (Current Year) 442 2012
ADT (Future Year) 708 2032
ADT (Heavy Commercial)
ESAL 69,000
7 TON DESIGN
DESIGN SPEED 55 MPH
DESIGN SPEED NOT ACHIEVED AT:
SOIL FACTOR 130
SHOULDER WIDTH 3'
STOPPING SIGHT DISTANCE BASED ON
3.5' HEIGHT OF EYE
0.5' HEIGHT OF OBJECT

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT
OF TRANSPORTATION'S "STANDARD SPECIFICATIONS
FOR CONSTRUCTION" SHALL GOVERN.

PLAN NOT TO SCALE

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE
COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED
BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

COUNTY ENGINEER

ALAN FORSBERG

DATE 3/12/2012 IC. No. 14720

DISTRICT STATE AID ENGINEER: NOTED FOR COMPLIANCE WITH STATE AID POLICY

STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

DATE 3/12/2012

S.A.P. 07-653-06 SHEET NO. 1 OF 8 SHEETS

ESTIMATED QUANTITY

ITEM NO.	ITEM	UNIT	CSAH # 53	NON PART.	TOTAL
(1)	2118.501 AGGREGATE SURFACING, CL-2	TON	14	0	14
(1)	2221.501 AGGREGATE SHOULDERING, CL-1 (M)	TON	300	0	300
(1)	2357.502 BITUMINOUS MATERIAL FOR TACK COAT	GAL	845	0	845
(1)	2360.609 BITUMINOUS MATERIAL FOR MIXTURE (PG 58-28)	TON	54	0	54
(1)	2360.609 BITUMINOUS AGGREGATE (CLASS "A" INTERMEDIATE)	TON	306	0	306
(1)	2360.609 BITUMINOUS AGGREGATE (CLASS "A" FINE)	TON	262	0	262
(1)	2360.609 BITUMINOUS AGGREGATE (GRAVEL INTERMEDIATE)	TON	219	0	219
(1)	2360.609 BITUMINOUS AGGREGATE (GRAVEL FINE)	TON	87	0	87
(1)	2360.609 BITUMINOUS (PRODUCE, HAUL, & LAY)	TON	928	0	928
(3)	2580.501 TEMPORARY LANE MARKING	LIN FT	484	0	484

(1) BASIS OF PAYMENT SPECIFIED IN SPEC. 1903 SHALL BE MODIFIED TO PRECLUDE ANY PRICE ADJUSTMENT FOR INCREASED OR DECREASED QUANTITIES.
(3) PLACED ON EVERY LIFT, REMOVED BEFORE NEXT LIFT AND PRIOR TO STRIPING.

CERT. BY Alan Forberg L.I.C. NO. 14720 MAR. 10, 2012 S.A.P. 07-653-06 SHEET NO. 2 OF 8 SHEETS

PROFESSIONAL ENGINEER

BASIS FOR PLANNED QUANTITIES

AGGREGATE SHOULDERING, & SURFACING

COMPACTED DRY DENSITY - 140 LBS. PER CU. FT.

BITUMINOUS SURFACE

BITUM. MAT'L FOR TACK COAT 0.05 GALS. PER SQ. YD.

BITUM. MAT'L FOR WEAR COURSE AC (PG 58-28) 5.8% BY WEIGHT

BITUM. COURSES, 110 LBS. PER 1" / SQ. YD.

AGGREGATE PROPORTIONS : 35% CLASS "A" INTERMEDIATE

30% CLASS "A" FINE

25% GRAVEL INTERMEDIATE

10% GRAVEL FINE

THE FOLLOWING STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY

STANDARD PLATES	
PLATE NO.	DESCRIPTION
80001	STANDARD BARRICADES

CERT. BY

Alan Fowling
PROFESSIONAL ENGINEER

LIC. NO. 14720 MAR. 10, 2012

S.A.P. 07-653-06

SHEET NO. 3 OF 8 SHEETS

SHLD. & SURF. QUANTITIES
ROAD # CSAH 53
PROJECT # S.A.P. 07-653-06

LOCATION	LENGTH FEET	AVER WIDTH FEET	DEPTH INCHES	AGGR. SHLD. TON	AGGR. SURF. TON
SHOULDER CL-1M					
STA 341 + 30 TO STA 350 + 72 RT	942	3	1.5	20	
STA 361 + 0 TO STA 403 + 45 RT	4245	3	1.5	110	
STA 341 + 30 TO STA 350 + 72 LT	942	3	1.5	20	
STA 362 + 75 TO STA 403 + 45 LT	4070	3	1.5	110	
EXTRA MATERIAL FOR FEES				40	
AGGR. SURFACING CL-2					
2 DRIVEWAYS @ 7 TONS					14
TOTAL				300	14

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SHOULDERING & SURFACING QUANTITIES

CERTIFIED BY _____

LIC. NO. 14720 MAR. 10, 2012

CSAH 53 SAP 07-653-06 SHEET 4 OF 8 SHEETS

CSAH 53 SUPERPAVE BITUM. CALCULATIONS								
LOCATION	LENGTH FEET	AVER WIDTH FEET	DEPTH INCHES	WEAR TON	BINDER TON	BITUM MAT'L TON	TACK COAT GAL	
BITUM. WEAR	STA 341 + 30 TO STA 350 + 72	942	27	1	155	9	141	
	STA 350 + 72 TO STA 359 + 38	866	28	1	148	8.6	135	
	STA 361 + 0 TO STA 362 + 75	175	50	1	53	3.1	49	
	STA 362 + 75 TO STA 403 + 45	4070	23	1	572	33.2	520	
TOTAL		928	0	54	845			

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CSAH 53 SUPERPAVE BITUM. QUANTITIES									
MIX TONS	BITUM MAT'L 5.8% TON	TOTAL AGGR. TONS	BITUM CL. "A" INTERM 35% TON	BITUM CL. "A" FINE 30% TON	BITUM GRAVEL INTERM 25% TON	BITUM GRAVEL FINE 10% TON	PRODUCE HAUL LAY TON		
WEAR	928	54	874	306	262	219	87	928	
TOTAL				306	262	219	87	928	

SURFACING QUANTITIES

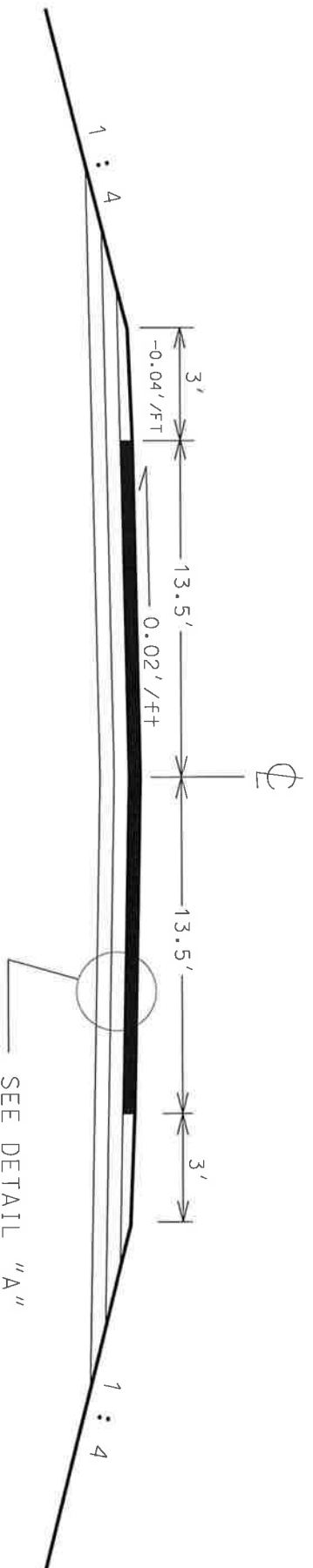
CERTIFIED BY

LIC. NO. 14720 MAR. 10, 2012

S.A.P. 07-653-06 SHEET NO. 5 OF 8 SHEETS

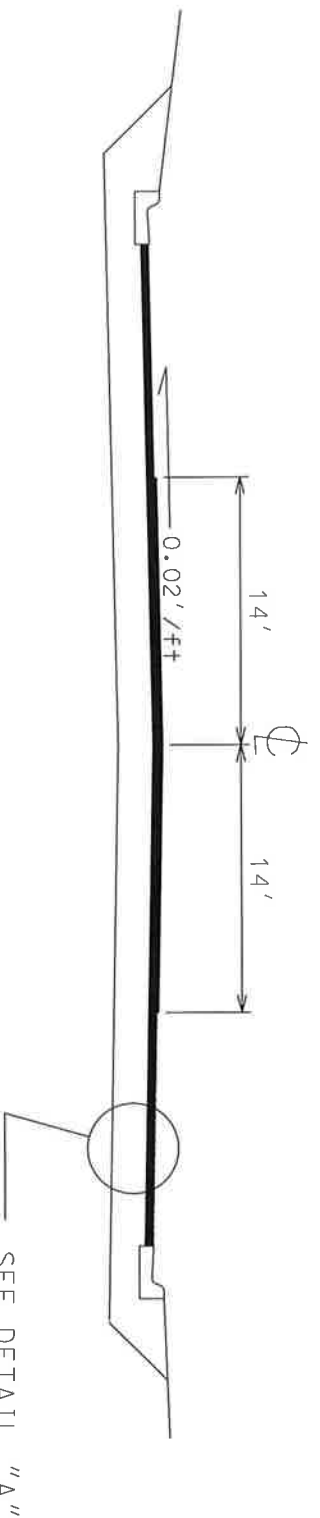
TYPICAL SECTION

STA 341 + 30 TO STA 350 + 72

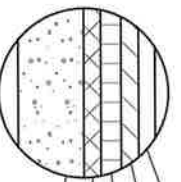


TYPICAL SECTION

STA 350 + 72 TO STA 359 + 38



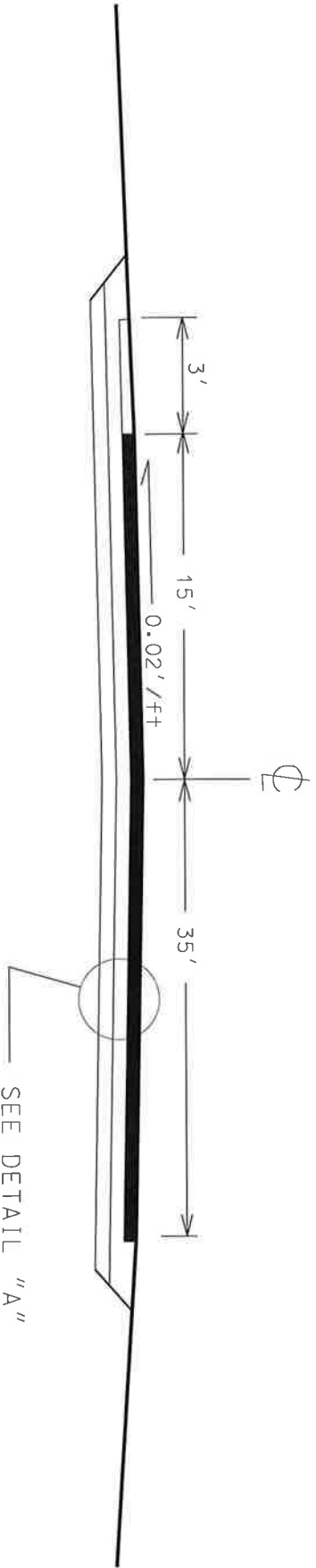
DETAIL "A"



- 1" SP WEARING COURSE MIXTURE (2360)
- INPLACE 1" WEARING COURSE MIXTURE (2331)
- INPLACE 2" ROAD MIXTURE (2321)
- INPLACE 1" ROAD MIXTURE
- INPLACE 7" AGGR. BASE CL-5 (2211)

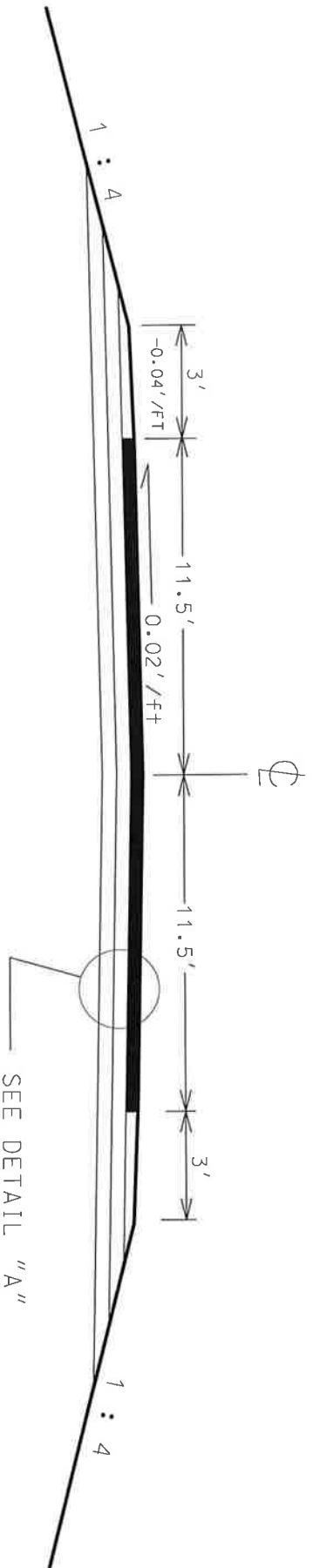
TYPICAL SECTION

STA 361 + 00 TO STA 362 + 75

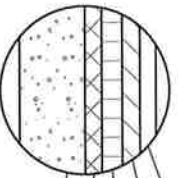


TYPICAL SECTION

STA 362 + 75 TO STA 403+45



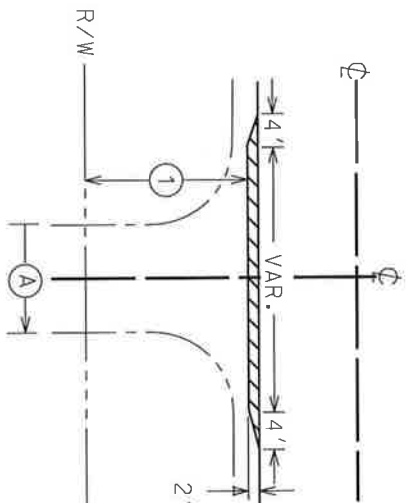
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BITUMINOUS APPROACHES AND ENTRANCES DETAIL

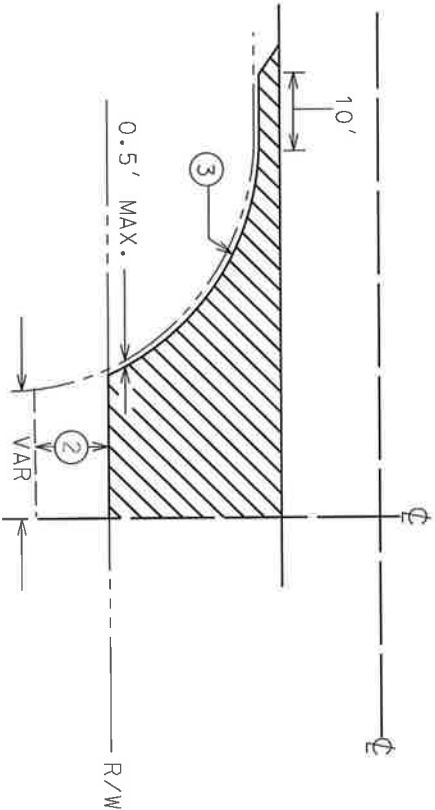
FIELD ENTRANCE



- (A) 20' FOR SINGLE F.E.
28' FOR DOUBLE F.E.

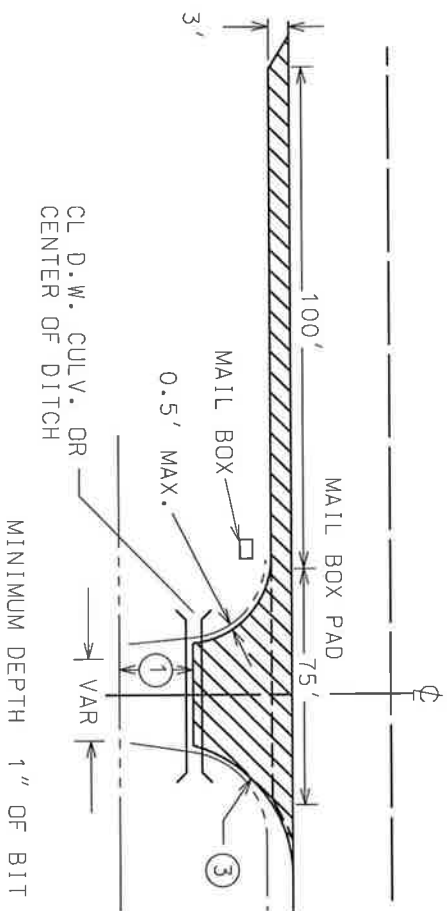
MINIMUM DEPTH 1" OF BIT

ROAD APPROACH



MINIMUM DEPTH 1" OF BIT

FARM & OTHER ENTRANCES



- (1) FINISH WITH AGGR. MATERIAL FROM
EDGE OF BITUM. TO A MIN. OF 10'.
- (2) FINISH WITH AGGR. MATERIAL, MIN. OF 10'.
- (3) BITUM. RADIUS TO BE STAKED IN
FIELD BY THE ENGINEER - 25' MIN.
(FOR FARM D.W. CONSIDER 30' TO 40' MAX.)

CONTRACTOR WILL BE REQUIRED TO SHAPE & NOTCH
ALL DRIVEWAYS, INTERSECTIONS & MAIL BOX PADS
THAT ARE NOT ALREADY PAVED AS DIRECTED BY THE
ENGINEER. WORK SHALL BE DONE INCIDENTAL TO THE
WEAR.

CONTRACTOR WILL BE REQUIRED TO HAND FINISH
SHOULDERS ON ALL APPROACHES AND ENTRANCES
AS DIRECTED BY THE ENGINEER.